

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently amended) An adaptation method comprising steps of:

using a selecting unit for adapting a variable transmission data rate in a transmitting node of a data communication system to a current link quality of a data communication channel wherein the data rate is selected by the transmitting node from a set of transmission data rates depending on a number of successful transmissions, the number of successful transmissions being compared in the transmitting node against one of a first value corresponding to a first state of the transmitting node and a second value corresponding to a second state of the transmitting node, wherein the second value is larger than the first value;

the step of adapting comprising in the transmitting node the steps of:

operating in [[a]] the first state in response to detecting a successful transmission of three or more but less than ten transmissions, wherein the first state corresponds to a link with fast changing quality;

operating in [[a]] the second state in response to detecting a successful transmission of ten or more transmissions, wherein the second state corresponds to a link with slow changing quality;

transitioning to the first state when detecting a faulty transmission while operating in the second state and selecting a lower transmission data rate in response to the detection of one or more faulty transmissions; and

selecting an adapted data transmission rate by selecting a new packet length different from an original packet length being used. [[.]]

2. - 20. (Canceled)

21 (Currently amended) A computer readable storage medium comprising a set of instructions that when executed by a processor cause the computer to perform a method comprising the steps of:

adapting a variable transmission data rate in a transmitting node of a data communication system to a current link quality of a data communication channel wherein the data rate is selected by the transmitting node from a set of transmission data rates depending on a number of successful transmissions, the number of successful transmissions being compared in the transmitting node against one of a first value corresponding to a first state of the transmitting node and a second value corresponding to a second state of the transmitting node, wherein the second value is larger than the first value;

operating in a first state of a transmission data rate in response to detecting a successful transmission of three or more but less than ten transmissions, wherein the first state corresponds to a link with fast changing quality;

operating in a second state of a transmission data rate in response to detecting a successful transmission of ten or more transmissions, wherein the second state corresponds to a link with slow changing quality;

and

transitioning to the first state when switching to a state of lower data transmission rate in response to detecting one or more defective transmissions by a transmitting node in the network while operating in the second state;

wherein the transmission data rate is changed by selecting a new packet length different from an original packet length being used.

22. (Currently amended) A data communication network comprising:

a first node comprising a transmitter comprising a variable data transmission rate;

wherein the transmitter comprises a selecting unit for adapting a variable transmission data rate in a transmitting node of the data communication network to a current link quality of a data communication channel wherein the data rate is selected by the first node from a set of transmission data rates;

a second node comprising a receiver; and  
a link connecting the first and second nodes;  
wherein the first node:

operates in a first state in response to detecting a successful transmission of three or more but less than ten transmissions;

wherein the first state corresponds to a link with fast changing quality;  
operates in a second state in response to detecting a successful transmission of ten or more transmissions;

wherein the second state corresponds to a link with slow changing quality; and  
switching to the first state switches to a state of a lower data transmission rate in response to detecting one or more defective transmissions by a transmitting node in the network operating in the second state;

wherein the data transmission rate is changed by selecting a new packet length different from an original packet length being used.